

S/169/63/000/002/094/127
D263/D307

AUTHORS: Urazayev, B. M., Babayants, S. P., Glushkov, M. I.,
Al'mukhanbetov, D., Koristashevskaya, T. I., Popov,
A. A., Antonenko, A. N., Kolik, A. L., Kotlyarov,
A. M., Kylbayev, P., Gul'nitskiy, V. L. and Tsare-
gradskiy, V. A.

TITLE: Geological and tectonic structure of the Dzhezkazgan-
Sarysuyskiy region in the light of existing geophy-
sical data, results and further directions of work

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 17, ab-
stract 2D99 (In collection: Bol'shoy Dzhezkazgan. Ge-
ol. i metallogeniya. Alma-Ata AN KazSSR, 1961, 82-100)

TEXT: Geophysical work was carried out in the above region with
other regional investigations, to discover areas promising for the
prospecting for copper and other useful minerals. The geological
and tectonic structure of the region is complex. Copper deposits
are associated with local folded structures of second and higher
Card 1/3

Geological and tectonic ...

S/169/63/000/002/094/127
D263/D307

orders, complicated by disjunctive disturbances, and lie in the gray sandstones of the Dzhezkazgan beds. Geophysical investigations, begun in 1955, make use of all methods. In spite of the difficulty of geological interpretation of geophysical data, it was possible to propose a structural-tectonic structure for the region. Three structural stages were marked out, 5 geologically distinct territories were resolved, and 3 main submeridional structures were discovered. A series of intrusive massifs was also found by gravimetric and magnetic explorations, which do not emerge on the surface of the erosion shear, together with a number of large scale tearing disturbances and fractures. Deep seismic soundings provided a picture of the course of the surface of Lower Paleozoic basement and of deeper boundaries. Electric exploration allowed a resolution of the Dzhezkazgan strata and demarkation of several salt domes. Owing to widespread occurrence of presumably salt dome structures and to the favorable section of the Upper Devonian and Lower Carboniferous, the Dzhezkazgan-Saryyskiy region may be regarded as a potential oil and gas area. From the results of combined geophysical works, it was possible to mark out regions which

Card 2/3

Geological and tectonic ...

S/169/63/000/002/094/127
D263/D307

are perspective for copper mineralization, among these the western border of the anticline. /-Abstracter's note: Complete translation. /

Card 3/3

KAPUSTIN, Leonid Davydovich, inzh.; ZALESSKIY, Lev Grigor'yevich, inzh.;
GLUSHKOV, Mikhail Tikhonovich, inzh.; SHIRYAYEV, A.P., red.;
MEDVEDEVA, M.A., tekhn.red.

[ER electric train with regenerative rheostatic braking] Elektro-
poezd ER s rekuperativno-reostatnym tormozheniem. Moskva, Vses.
izdatel'sko-poligr.ob"edinenie M-vn putei soobshchenia, 1960.
90 p. (MIRA 14:1)

(Electric railroads--Brakes)

GLUSHKOV, M.T., inzh.

A.C. electric trains. [Trudy] LITZHT no.193:26-35 '62.
(MIRA 15:12)

1. Rzhskiy vagonostroitel'nyy zavod.
(Electric railroads) (Railroad motorcars)

GLUSHKOV, M.T.; GONCHAROV, K.B.

ER7 a.c. powered electric train. Elek.i tepl.tiaga 5 no.4:22-28
Ap '61. (MIRA 14:6)

1. Glavnyy inzhener spetsial'nogo konstruktorskogo byuro Rzhnskogo
vagonostroitel'nogo zavoda (for Glushkov). 2. Zamestitel' glavnogo
inzhenera spetsial'nogo konstruktorskogo byuro Rzhnskogo
vagonostroitel'nogo zavoda (for Goncharov).
(Electric railroads--Trains)

SARSKIY, Moisey Rafailovich, kand. tekhn.nauk; GLUSHEV,
Mikhail Tikhonovich, inzh.; VARCHAGOV, Konstantin
Borisovich, inzh.; ZALESSKIY, Lev Grigor'yevich,
inzh.; LALETIN, Geryat Pavlovich, inzh.; LYUTUK,
Leonid Stryvovich, inzh.; KAPUSTIN, L.D., red.

[The ER9 electric train] Elektrovoznyy Krov. [By] M.R.
Sarskii i dr. Moskva, 1974. 25 p. (MIRA 18:1)

L 14498-66 EWT(1)/ETC(F)/EPF(n)-2/EWG(m) IJP(c) GG/AT
ACC NR: AP6003755 SOURCE CODE: UR/0181/66/008/001/0024/0027

AUTHOR: Veselago, V.G.; Glushkov, M.V.; Rukhadze, A.A.

ORG: Physics Institute im. P.N. Lebedev, AN SSSR, Moscow (Fizicheskly Institut AN SSSR)

TITLE: The amplification of electromagnetic waves in solid-state plasmas

SOURCE: Fizika tverdogo tela, v. 8, no. 1, 1966, 24-27

TOPIC TAGS: electromagnetic wave phenomenon, plasma electromagnetic wave, plasma oscillation, solid state plasma

ABSTRACT: Recently, numerous researchers have investigated the possible electromagnetic wave amplification in solid-state plasmas in the presence of carrier drifts. Starting from the linearized system of Maxwell's equations, the equation of motion of two types of carriers, and the equation of continuity, the present authors develop a theory of and study the conditions for the amplification of UHF oscillations in solid-state plasmas in the presence of carrier drifts in external electric and magnetic fields. An analysis of the results shows that there are favorable conditions for the amplification of waves propagating along the magnetic field in a plasma with an unequal number of carriers. An estimate is given of the maximum frequency which can be amplified, of the amplification, and of the

Card 1/2

L 14498-66

ACC NR: AP6003755

power dissipated in InSb and in Sb samples containing admixtures disequilibrating the number of carriers. The respective carrier concentrations are $\sim 10^{17} \text{ cm}^{-3}$ and $\sim 10^{19} \text{ cm}^{-3}$, and the maximum frequencies which could be amplified are $\sim 10^{10} \text{ sec}^{-1}$ and up to 10^{12} sec^{-1} . Orig. art. has: 13 formulas and 1 figure. [08]

SUB CODE: 20 / SUBM DATE: 19 June 65 / ORIG REF: 003 / OTH REF: 006
ATD PRESS: 4197

Card 2/2

GLUSHKOV, N.

Moving-Picture Projectors

Regulating the clearance between the notched reel and its supporting rollers. Kino-mekhanik, No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

GLUSHKOV, N.

Let us strengthen the finances of enterprises. Fin. SSSR 19
no.2:27-31 F '58. (MIRA 11:3)

1. Nachal'nik finansovogo otдела Krasnoyarskogo sovnarkhoza.
(Krasnoyarsk Territory--Finance)

GLUSHKOV, N.

The regional economic council and profits. Fin. SSSR 19 no.8:45-48
Ag '58. (MIRA 11:9)

1. Nachal'nik finansovogo otdela Krasnoyarskogo sovnarkhosa.
(Krasnoyarsk Territory--Industries)

GLUSHKOV, N.

New organization form of financial and economic work. Fin. SSSR 21
no.10:59-62 O '60. (MIRA 13:10)

1. Nachal'nik finansovo-ekonomicheskogo upravleniya Krasnoyarskogo
sovnarkhoza.

(Krasnoyarsk Territory--Finance)
(Krasnoyarsk Territory--Industrial management)

GLADONIA 7, N.N.

BSI culture - Equipment and Supplies

Production tests of honeycombs with enlarged cells. Izhelerskoye 29 no. 4, April 1952

9. Monthly List of Russian Accessions. Library of Congress, August² 1958, Encl.

1. ПУШКОВ, М.М.
2. USSR (600)
4. Bee Culture
7. Introducing scientific achievements into apiaries of collective and state farms.
Pchelovodstvo 29. no. 11. 1952.
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1. A. M. DUBROV

2. BOOK (600)

4. Bee Culture

7. Keeping strong bee colonies in no-body hives. Izhmavstvo no. 1. 1953.

9. Monthly List of Russian Accessions. Library of Congress. March 1953, Incl.

GLUSHKOV, N. M., ed.

Achievements of science and progressive experience in bee culture Moskva, Gos.
iza-vo sel'khoz. lit-ry, 1954. 271 p.

USSR / Farm Animals. Honey Bee

Abs Jour: Ref Zhur-Biol., No 5, 1966, 21549

Author : Glushkov N. M.

Inst :

Title : A Plan for Scientific Research on Apiculture for 1956-1960 (O plane nauchno-issledovatel'skikh rabot po pchelovodstvu na 1956-1960 gody)

Orig Pub:

Abstract: No abstract.

Card 1/1

USSR / Farm Animals. Honeybee.

Q-7

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 64591

Author : Glushkov, N. M.; Poltav, V. I.

Inst : Not given

Title : On Apiculture in Poland (from Personal Impressions).

Orig Pub : Pchelovodstvo, 1957, No. 12, 53-54.

Abstract : There are about 1,000,000 bee colonies in Poland. Scientific work is conducted by the Section of Apiculture of the Institute of Horticulture situated at Skierniewice, 20 km. from Warsaw, by five zonal experimental stations and by 15 experimental apiaries. The diseases of bees are studied at the Central Scientific Research Veterinary Institute (Gorzow Wielkopolski).

Card 1/1

62

GLUSHEKOV, N.M., kand.sel'skokhozyaystv.nauk, red.;SYCHIK, Ye.V., red.;
DEYEVA, V.M., tekhn.red.

[Ways of increasing productivity in beekeeping] Priemy povy-
sheniia produktivnosti pchelovodstva. Moskva, Gos.izd-vo
sel'khoz.lit-ry, 1958. 271 p. (MIRA 12:3)
(Bee culture)

GLUSHKOV, Nikolay Mikhaylovich, zasluzhennyy zootekhnik REFSR; KATSHEL'SON,
S.M., red.; SAVCHENKO, Ye.V., tekhn.red.

[For further development of beekeeping] Za dal'neishee razvitie
pchelovodstva. Moskva, Izd-vo "Znanie," 1959. 31 p. (Vsesoiuznoe
obshchestvo po rasprostraneniю politicheskikh i nauchnykh znanii.
Ser. 5, Sel'skoe khoziasitvo, 3) (MIRA 12:2)
(Bee culture)

GLUSHKOV, N., zasluzhennyy zootekhnik RSFSR

Large-scale experimentation in beekeeping. lueka 1 perod.op.
v sel'khoz. 9 no.8:43-45 Ag '59. (MIRA 12:12)
(See culture)

GLUSHKOV, Nikolay Mikhaylovich; ROZOV, Sergey Alekseyevich; ULIN,
I.I., red.; KHOLIN, G.Ye., red.; SAYTANIDI, L.D., tekhn.
red.

[Advice to the beekeeper] Sovety pchelovodu. Moskva, Izd-
vo M-va sel'.khoz. RSFSR, 1961. 150 p. (MIRA 15:11)
(Bee culture)

GLUSHKOV, N. (Director of the Scientific Research Institute of Apiculture)

A letter to the Editor, concerning the compilation of the bibliography of new scientific works on apiculture (beginning with Jan. 1, 1961)

Veterinariya, vol. 39, no. 7, July 1962 p. 37

GLUSHKOV, Nikolay Mikhaylovich; KADIYEVA, Ye.V. , red.; GUREVICH, K.M.;
tekhn. red.

[Manual for the bee keeper]Sputnik pchelovoda. Moskva, Sel'khozizdat, 1962. 318 p. (MIRA 15:9)
(Bee culture)

GLUSHKOV N. N.

Lesi Urala (Forests of The Ural) Sverdlovsk, Izd-vo Ural'skogo Filiala Akademii Nauk SSSR, 1948.

230 P. Illus., Maps, Tables.

At Head of Title: N. N. Glushkov, V. I. Vengerov (ed) Akademiya Nauk SSSR, Ural'skiy Filial.

SO: 7N/5
729.4
.T6

ACC NR: AP6002937

SOURCE CODE: UR/0286/65/000/024/0104/0104

AUTHORS: Alferov, A. V.; Vashchenko, V. P.; Glushkov, N. P.; Shapalev, V. R.

ORG: none

TITLE: A device for the automatic verification of angle-code converters. Class 42, No. 177165.

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 104

TOPIC TAGS: code converter, code evaluation, error automatic data correlation, error detection code

ABSTRACT: This Author Certificate presents a device for the automatic verification of angle-code converters. The device includes a reference converter and the converter under examination, both of which are rotated by a single motor through a reduction drive. The device also includes a circuit for comparison of the code signals. This device provides simultaneous verification of all code paths and automates the process of initially setting the converters. The registers which store the codes of the reference converter and the converter under examination are connected through a circuit of discharge comparison of the codes to the

Card 1/3

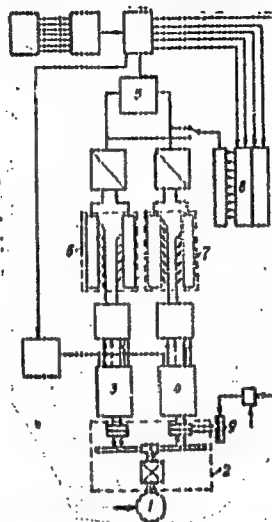
UDC: 681.142--523.8.001.57

L 22717-66

ACC NR: AP6002937

register for indicating the errors. These registers are also connected through the same circuit to a control device which engages and disengages the electromagnetic clutch (see Fig. 1).

Fig. 1. 1 - Motor; 2 - reduction gear;
3 - reference converter;
4 - converter under examination;
5 - circuit for comparison of the
code signals; 6 and 7 - storage
registers; 8 - register indicating
the error; 9 - electromagnetic
clutch.



Card 2/3

1 1071-64

ACC NR: AP6002937

The clutch engages at the moment of coincidence of the codes of the reference converter and the converter under examination. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 01Nov63

Card 3/3

LEMPERT, Ye.N., inst. Gidrot. N.A., 1950, 1951, 1952

Machine for collecting peat stubs. Tsvet. prom. No. 7-9
161. (1951, 1952)

1. Tsvetopredprava iye Gaisova, Gorkovskogo sovkharkoza.
(Peat machinery)

GOLOVCHINSKAYA, Ye.S.; GLUSHKOV, R.G.; CHEMERISSKAYA, A.A.

Purification of 8-methyltheobromine. Zhur.prikl.khim, 30
no.12:1806-1810 D '57. (MIRA 11:1)
(Xanthine)

YEVSTIGNEYEVA, R.P.; GLUSHKOV, R.G.; PREOBRAZHENSKIY, N.A.

Isoquinoline compounds. Part 15: Synthesis of isomeric o-methyl-
psychotrines. Zhur. ob. khim. 28 no.9:2463-2472 S '58.
(MIRA 11:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii.
(Alkaloids) (Psychotrine)

5(3), 17(3)

SOV/80-32-4-39/47

AUTHORS: Glushkov, R G and Golovchinskaya, Ye. G.

TITLE: The Synthesis of α, β Cyclopentamethylenetetrazole (Corazole) (Sintez α, β -tsiklopentametilientetrazola (korazola)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 920-923 (USSR)

ABSTRACT: The α, β -cyclopentamethylenetetrazole (corazole) is a powerful camphor-like drug with respect to its action on respiration, central nervous system and blood circulation. There are many patents for various methods of its preparation. The authors made use of one of the German patents of Knoll [Ref 5] and introduced some modifications and improvements in order to develop a method of corazole synthesis, which could be suitable for practical purposes. Two variants of the synthesis were developed. In one of them, the oxime of cyclohexanone serves as an initial substance, and in the other - the lactam of ϵ leucine. The purification of the technical corazole obtained is achieved by means of crystallization out of the small quantities of water. A detailed description of the synthesis and subsequent purification is given in the article.

There are: 1 graph and 10 references, 1 of which is Soviet, 7 German, 1 American and 1 French

Card 1/2

SOV/80-32-4-39/47

The Synthesis of α , β -Cyclopentamethylenetetrazole (Corazole)

ASSOCIATION. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Research Chemical-Pharmaceutical Institut imeni S. Ordzhonikidze)

SUBMITTED. November 29, 1957

Card 2/2

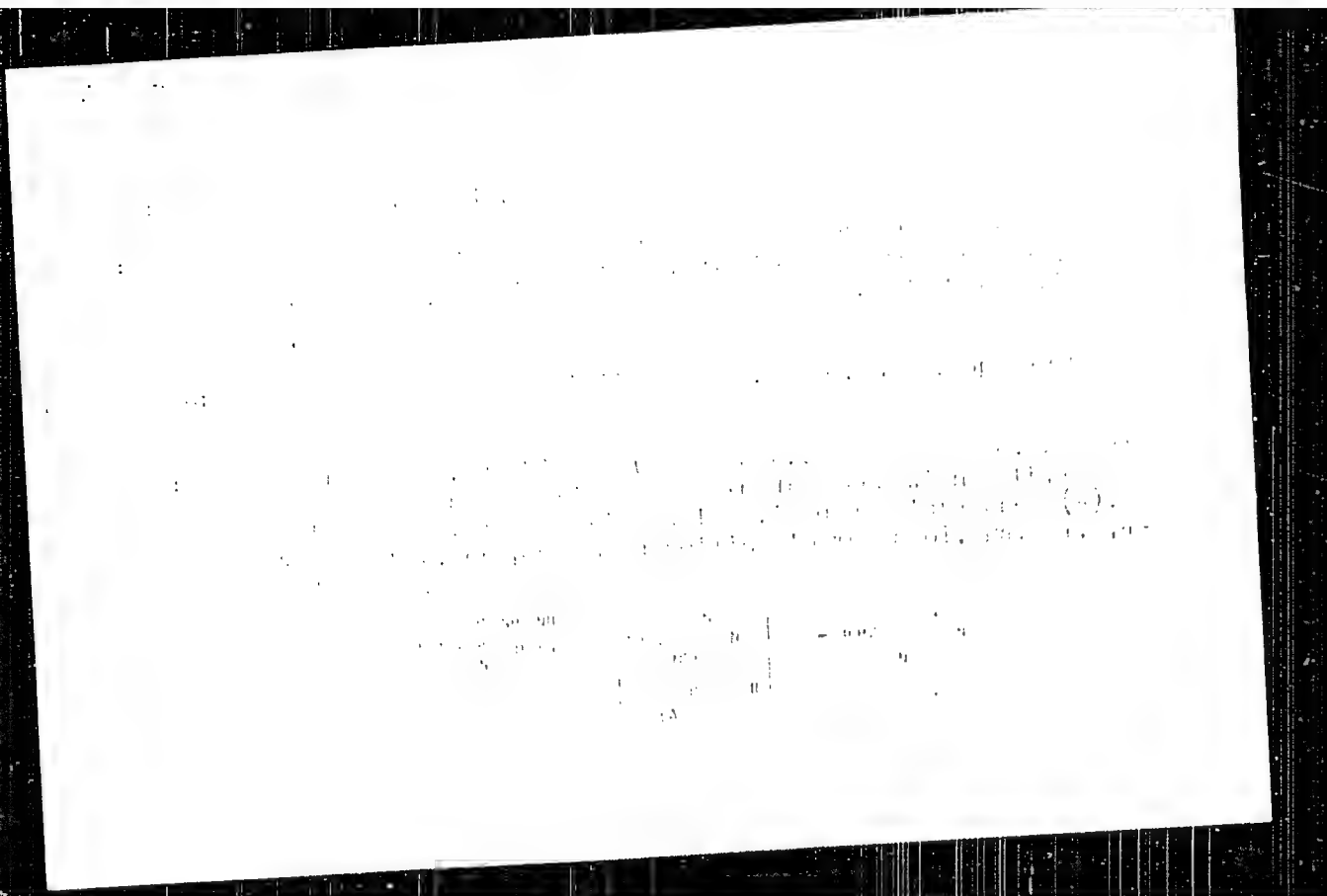
GLUSHKOV, R.G.; GOLOVCHINSKAYA, Ye.S.

Synthesis of corasole (, -pentamethylentetrazole) from capro-
lactum. Med.prom. 14 no.1:12-15 Ja '60. (MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S. Ordzhonikidze.
(METRAZOLE)

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GLUSEKOV, R.G.; MAGIDSON, O.Yu.

Condensed polymethylene derivatives of heterocycles, based on lactams. Part 2: Tendency of 2-phenyl-4-(2'-homopiperidylene)-5-oxazolone to rearrange into 2-phenyl-1,5-pentamethylene-4-imidazolecarboxylic acid and its methyl ester. Zhur.ob.khim. 30 no.6:1855-1860 Je '60. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Imidazolecarboxylic acid) (Oxazolinone)

GLUSHKOV, P.G.; MAGIDSON, O.Yu.

Synthesis of some 8,9-pentamethylenepurines. Dokl.AN SSSR
133 no.3:585-587 J1 '60. (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevti-
cheskiy institut imeni S.Otdzhonikidze. Predstavleno Akad.
M.M.Shev'yakinyu.
(Purine)

GLUSHKOV, R.G.; MAGIDSON, O.Yu.

Condensed polymethylene derivatives based on lactams. Part 3:
Synthesis of 1,2-pentamethylenepyrimidines. Zhur. ob.khim. 31
no.1:189-193 Ja '61. (MIRA 14:1)

11 Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S. Ordzhonidize.
(Pyrimidine)

GLUSHKOV, R.G.; MAGIDSON, O. Yu.

Condensed polymethylene derivatives of heterocycles based on
lactams. Part. 4: Synthesis of 8,9-pentamethylenepurines.
Zhur. ob. khim. 31 no.4:1173-1182 Ap '61. (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevti-
cheskiy institut imeni S. Ordzhonikidze.
(Purine)

GLUSHKOV, R.G.; MAGIDSON, O.Yu.

Condensed polymethylene derivatives of heterocycles based on
lactams. Part 5: Synthesis of 8, 9-tri- and tetramethylene purine.
Zhur.ob.khim. 31 no.6:1906-1912 Je '61. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsev' -
cheskiy institut imeni S.Ordzhonikidze.
(Cyclobutane) (Purine)

GLUSHKOV, R.G.; MAGIDSON, O.Yu

Synthesis of β -vinylacrylic acid and its esters. Med. prot. 16
no.3:27-31 Mr '62. (HHA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S.Ordzhonikidze.
(PENTADIENOIC ACID)

GLUSHKOV, R. G. Cand Phys-Math Sci -- "Synthesis of condensed nitrogen-containing heterocycles on of certain lactams." Mos, 1961 (Acad Sci USSR. Inst of Inorganic Chem im N. D. Zelinskiy). (KL, 4-61, 186)

-61-

GLUSHKOV, T.

Formalin preparation "Internal constitution of hamster."
Biol i khim 7 no. 2: 59-61 '64.

GLUSHKOV, V., inzh. ekon. (Stalingrad).

Remarks on the determination of the number of engineering workers
and employees in a workshop. Sots. trud no.2:130-131 7 '58.
(Industrial management) (MIRA 11:1)

GLUSHKOV, V. (Khar'kov); GRUBE, G. (Alma-Ata); FINGENOV, N.
(Petrozavodsk); MARTINOVICH, A. (Murmansk); KALLING, V.
(Tallin); TAMAROVSEIY, V. (Magadan); PAPANICOPULC, S.
(Tbilisi); REUTOVA, I. (Novosibirsk)

Our outside correspondents report. Grazhd.av. 18 no.7:24-25
Jl '61. (MIRA 14:8)

1. Vneshtatnyye korrespondenty zhurnala "Grazhdanskaya
aviatsiya".

(Aeronautics, Commercial)

KRASOVSKIY, B.M., inzh.; GLUSHKOV, V.I., inzh.

Calculational relationship between consumer loads and heating loads in the solution of problems in centralized control of central heating systems. Elek. sta 36 no.4:42-43 Ap '65.

GLUSHKOV, S.; MAKHORKIN, I.

[Soviet Kamchatka] Sovetskaya Kamchatka. Moskva, Izd-vo
"Znanie", 1953. 31 p.

(MLRA 6:11)
(Kamchatka)

GLUSHKOV, V.F.

GLUSHKOV, V.F.

Wound of the left ventricle of the heart. Khirurgiya no.5:69
(MLBA 7:7)
My '54.

1. Iz khirurgicheskogo otdeleniya Belovskoy gorodskoy bel'nitsy
No. 1 Kemerovskoy oblasti.
(HEART, wounds and injuries,
*left ventricle)
(WOUNDS AND INJURIES,
*heart, left ventricle)

GLUSHKOV, V.F. (Belovo Kemrovskoy oblasti)

Intestinal obstruction in children caused by hawthorn berries.
Khirurgiia no.9:71 S '54. (MLRA 7:12)

(FRUITS,

hawthorn berries causing intestinal obstruct. in child.)

(INTESTINAL OBSTRUCTION, in infant and child,
caused by hawthorn berries)

PLUSHKOV, V.F.

Method for painless subcutaneous injection of fluids. Khirurgia
(MLRA 9:7)
32 no.3:83 Mr '56.

1. Iz gorodskoy bol'nitsy g.Belovo Kemerovskoy oblasti.
(INJECTIONS, HYPODERMIC)

GLUSHKOV, V.F.

Prevention of burns in the distillation shop of the Belovo zinc
plant. Ortop., travm. i protez. 18 no.2:36-37 Mr-ap '57.
(MLRA 10:8)

1. Iz Belovskogo gorzdravotdela (zav. - A.I.Pedanzov)
(INDUSTRIAL HYGIENE
prev. of burns in lead factory)
(BURNS, prev. and control
in lead factory)

GLUSHKOV, V.F.

Primary suture in rupture of the urethra. Urologia 25 no.2:15-
18 Mr-Apr '60. (MIRA 13:12)
(URETHRA--RUPTURE) (SUTURES)

GLUSHKOV, V.F.

Preventing complications in subcutaneous infusions. Med. sestra
20 no.1:48 Ja '61. (MIRA 14:3)

1. Belovskaya gorodskaya bol'nitsa No.1 Kemerovskoy oblasti.
(INJECTIONS, SUBCUTANEOUS)

GLUSHKOV, Viktor Grigor'yevich, inzh., gidrolog [1883-1939]; L'VOVICH, M.I.;
GERASIMOV, I.P., akademik, red.; BLIZNYAK, Ye.V., red. [deceased];
DAVIDOV, M.I., KUNIN, V.N., otv. red.; POSLAVSKIY, V.V., red.; BIRINA,
A.V., red. izd-va; POLYAKOVA, T.V., tekhn. red.

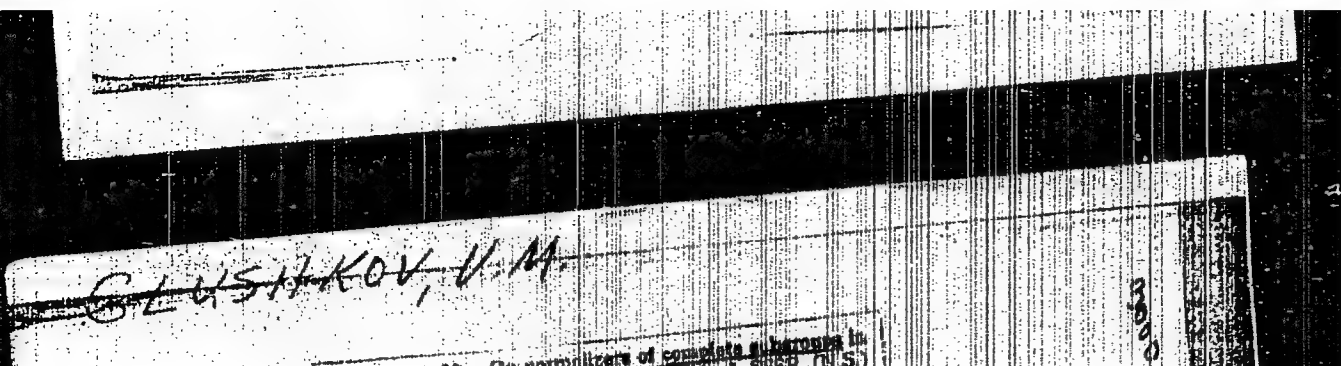
[Theoretical problems and methods of hydrological research] Voprosy
teorii i metody gidrologicheskikh issledovaniy. Moskva, Izd-vo
Akad. nauk SSSR, 1961. 415 p. (MIRA 14:9)
(Hydrology—Research)

GLUSHKOV, V.M.

Glushkov, V. M. On the theory of \mathbb{Z}_2 -groups. Doklady
Akad. Nauk SSSR (N.S.) 74, 885-888 (1950). (Russian)
The first part of this paper contains the groups with

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"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515420018-5

Source: Mathematical Reviews. 1950 Vol. 11 No. 8

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515420018-5"

GLUSHKOV, Viktor Mikhaylovich.

Ural Forest Technological Inst. Academic degree of Doctor of Physical and Mathematical Sciences, based on his defense, 26 December 1955, in the Council of Moscow Order of Lenin and Order of Labor Red Banner State U imeni Lomonosov, of his dissertation entitled: "Topological locally nil potent groups."

Academic degree and/or title: Doctor of Sciences

SC: Decisions of VAK, list no. 5, 3 Mar 56, Bulletin' MVO SSSR, No. 2, Jan 57, Moscow, pp 17-20, Uncl. JPRS/NY-466

GLUSHKOV, V. M.
USSR/Mathematics

Card 1/1

Author : Glushkov, V. M.
Title : About one class of non-commutative locally-bicompact groups
Periodical : Dokl. AN SSSR., 96, Ed. 2. 229 - 232, May 1954.
Abstract : Report is devoted to the study of locally bicompact, locally nilpotent groups. According to certain theorems a locally bi-compact, locally nilpotent group is then and only then a Lie group when the subgroup of all its bicompact elements is a Lie group. Certain theorems show that the properties of arbitrary locally bicompact locally nilpotent groups are to a greater extent determined by the properties of their maximum periodical sub-groups. Any periodical locally bicompact locally nilpotent group possesses open bicompact sub-groups. Examples of such groups are given. Nine references; 7 USSR since 1938.
Institution : Ural Forest Technical Institute
Submitted : Presented by Academician P. S. Aleksandrov, March 3, 1954, March 2, 1954.

Math (3)
2

Mathematical Reviews
Vol. 14 No. 7
July - August, 1953
Algebra

Glas'kov, V. M. On the central series of infinite groups.
Mat. Sbornik N.S. 31(73), 491-496 (1952). (Russian)
In a group with an ascending [descending] central series,
a so-called ZA-group [ZD-group], the length of the upper
[lower] central series is called the ZA-class [ZD-class] of
the group. Several questions generalizing to the transfinite
are known facts about groups with finite ZA-class or

6/11/54 (O.V.R.)

ZD -class are answered. Foremost is the result that for every ordinal γ , there exists a ZA -group with ZA -class γ . But, moreover, there exists such a group with the additional property of being a ZD -group with ZD -class not exceeding ω . This contrasts the fact that a ZA -group which has a finite ZD -class must have its ZA -class also finite. For every ordinal $\gamma \geq \omega + 1$, there exists a ZA -group with ZA -class γ which is not a ZD -group. Since [according to the (unavailable) dissertation of D. M. Smirnov, Ivanovskii Gos. Pedagog. Inst., 1951] the ZD -class of a ZA -group with ZA -class ω can not exceed $\omega + 1$, only two possibilities exist for the ZD -class, namely, ω and $\omega + 1$; examples show that each possibility can be realized. If one of the maximal abelian normal subgroups \mathfrak{A} of a ZA -group \mathfrak{G} is contained in a hypercenter with finite ordinal, then the ZA -class of \mathfrak{G} is known [using the cited dissertation] to be finite; by contrast, if \mathfrak{A} is contained in a hypercenter with ordinal not exceeding ω , then the ZA -class of \mathfrak{G} can be arbitrary. All these results follow readily from the main theorem asserting, for arbitrary ordinal γ and arbitrary field P , the existence of a group of type P_γ . A complete description of the so-called type P_γ is too lengthy to be cited here. R. A. Good.

GLUSHKOV, V.M.

✓ Glushkov, V. M. Exact triangular representations of Lie
Z-algebras. Dokl. Akad. Nauk SSSR (N.S.) 100, 617-
620 (1955). (Russian)

The author generalizes G. Birkhoff's theorem on triangular representations of Lie algebras of finite rank to the much wider class of the so called Z-algebras of Lie. A Z-algebra of Lie is a Lie algebra which possesses a central system, i.e. a system $M = \{A_\alpha\}$ of ideals A_α , ordered by inclusion, satisfying the following conditions: 1) The zero ideal of the given algebra A as well as the algebra A itself are included in M . 2) The system M contains all unions and crosscuts of ideals belonging to M . 3) Let a be an arbitrary nonzero element of A . If A_α is a maximal ideal of the system M which does not contain a , then $[a, b] \in A_\alpha$ for any element b of A . His principal result is that any Z-algebra of Lie possesses a faithful representation by strictly triangular matrices of a certain specified type.

The class of the Z-algebras of Lie includes as a subclass the locally nilpotent Lie algebras, i.e. algebras where any finite set of elements lies in a nilpotent algebra. He gives a simple proof of this assertion by using the following property of locally nilpotent Lie algebras: Any ideal of a locally nilpotent Lie algebra Z which is generated by the totality of commutators $[l, x]$, $x \in Z$, and l a fixed element of Z , does not contain l .

J. Levitski (Jerusalem).

GLUSHKOV, V.M. (Sverdlovsk)

Locally nilpotent groups without torsion, complete in simple
topological fields. Mat.sbor.37 no.3:477-506 M-D'55.
(Groups, Theory of) (MLRA 8:12)

GLUSHKOV, V. M.

✓ Glazkov, V. M. *Malpighian product of 1950-1951*.
1951. 11 (1950), no. 50. 11:1137.

THE

GIUSKOV, V.M.

with φ_a on G .
Theorem. The group G always exists; $G \cap G_a = \{e\}$ for
 $a \neq \beta$; G is algebraically generated by the elements of the
groups G_a . If G' is any other group satisfying (i), (ii), (iii)
then there is a topological isomorphism ϕ of G onto G' .

Glushkov V.M. 44-1-154
TRANSLATION FROM: Referativnyy zhurnal, Matematika, 1957, Nr 1,
p 20 (USSR)
AUTHOR: Glushkov, V.M.
TITLE: Topological Groups and Lie Algebras
(Topologicheskiye gruppi i algebry Li.)
PERIODICAL: Tr. 3-go Vses. matem. s"yezda, 2, Moscow, AN SSR,
1956, p 112
ABSTRACT: Bibliographic entry

Card 1/1

6 L 615 + Kov, 6/11/60

STATE BOOK EXPLANATION

AC/3/55

1. This book is a collection of reports of the Conference on Computational Mathematics and the Use of Computer Techniques, held in Moscow, 1959. The reports are presented in the following order:

2. The first section contains reports of the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR.

3. The second section contains reports of the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR.

4. The third section contains reports of the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR.

5. The fourth section contains reports of the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR.

6. The fifth section contains reports of the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR.

7. The sixth section contains reports of the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR.

8. The seventh section contains reports of the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR.

9. The eighth section contains reports of the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR.

10. The ninth section contains reports of the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR, and the Institute of Mathematics and Mechanics, Academy of Sciences of the USSR.

Card 7/7

AC/rel
1-13-60

GLUSHKOV, V.M.; GHEDENKO, B.V.

Electronic calculating machines. Visnyk AN URSR 28 no.9:3-10.
(MIRA 11:1)

S '57.

(Electronic calculating machines)

GLUSHKOV, V.M.

Lie's algebras of locally bicom pact groups.
no.2(74):137-142 Mr-Apr '57.
(Groups, Theory of)

Usp.mat.nauk 12
(MIRA 10:7)

GLUSHKOV, V.M.

Structure of locally bicomact groups and Hilbert's fifth problem.
Usp.mat.nauk 12 no.2(74):3-41 Mr-Av '57. (MIRA 10:7)
(Groups, Theory of)

SUBJECT USSR/MATHEMATICS/Algebra
AUTHOR GLUSKOV V.M.

CARD 1/2

PG - 773

TITLE On the theory of nilpotent locally bicomact groups:
PERIODICAL Izvestija Akad.Nauk 20, 513-546 (1956)
reviewed 5/1957

Let G be a topological group. If the factors G_{i-1}/G_i ($i=1, \dots, k$) of its normal series

$$G = G_0 \supset G_1 \supset \dots \supset G_k = \{e\}$$

are topologically isomorphic to the subgroups of the additive group of the p -adic number field or to finite cyclic p -groups (p - prime number), then the normal series is called a p -series. If in it cyclic factors are missing, then it is called a p -adic series. The present paper is devoted to the investigation of nilpotent bicomact groups with finite p -series. Several theorems are proved, e.g.:

1. By preserving of the topology every nilpotent bicomact group G with a finite p -adic series can be imbedded as an open subgroup into a nilpotent Lie group H with a finite rank over the p -adic number field.
2. From the topological isomorphism of the open subgroups G_1 and G_2 of the nilpotent Lie groups H_1 and H_2 with a finite rank over the p -adic number field there follows the topological isomorphism of the groups H_1 and H_2 .

ISSN 0013-788X (1956)

CARD 2/2

PG - 773

group G with a finite p -adic

Glushkov V.M.

42-1-9/13

AUTHOR: ALEKSANDROV, P.S., GLUSHKOV, V.M.

TITLE: Aleksandr Gennadievich Kurosh (On the Occasion of his 50th Birthday) (Aleksandr Gennadievich Kurosh (K pyatidesyatiletiiyu so dnya rozhdeniya))

PERIODICAL: Uspekhi Matematicheskikh Nauk, 1958, Vol 13, Nr 1, pp 217-224 (USSR)

ABSTRACT: This is a short biography, a summary of the scientific work and an appreciation of the merits of Kurosh as researcher and prominent pedagogue. The paper contains a list of scientific publications (ordered with respect to the years) with altogether 43 numbers and a photo of the celebrator of the jubilee.

AVAILABLE: Library of Congress
Card 1/1 1. Biography 2. Scientific reports

28(2)

PHASE I BOOK EXPLOITATION

SOV/1345

Akademiya nauk Ukrainskoy SSR. Vychislitel'nyy tsentr
Voprosy vychislitel'noy matematiki i tekhniki (Problems in Computer
Mathematics and Technique) Kiyev, Izd-vo AN Ukrainskoy SSR,
1958. 97 p. (Series: Its: Sbornik trudi, vyp. 3) 7,000
copies printed.

Editorial Board: Glushkov, V.M., Doctor of Physical and Mathematical
Sciences (Resp. Ed.), Dashevskiy, L.N., Candidate of Technical
Sciences, and Shkabara, Ye. A., Candidate of Technical Sciences;
Ed. of Publishing House: Kaplan, Ya. L.; Tech. Ed.: Rakhlina, N.P.

PURPOSE: This collection of articles, issued by the Computer Center
of the Ukrainian SSR Academy of Sciences, is intended for
scientists and engineers in the field of computer mathematics and
techniques, and for students of vuzes specializing in this field.

COVERAGE: The collection is devoted to the programming of mathe-
matical problems on electronic computers and to the design of

Card 1/8

SCV/1345

Problems in Computer Mathematics (1977)

TABLE OF CONTENTS:

Pogrebinskiy, S.B., and I.B. Pogrebinskiy. Performing Operations of Multiplication and Division in Electronic Digital Computers 3

The authors describe an improved, shortened method of performing multiplication and division which not only simplifies the construction of arithmetic units of high-speed computers but also considerably increases their speed of operation. There are no references.

Korolyuk, V.S., L.P. Nizhnik, and Ye.L. Yashchenko. Programming of Tables for Optimum Methods of Statistical Acceptance Control 9

The authors refer to A.N. Kolmogorov, who posed the problem of determining a statistical control method which would provide the most economical effort when checking large quantities of products. Practical use of this method requires the establishment of appropriate tables. The

Card 3/8

Problems in Computer Mathematics (Cont.)

SOV/1345

authors explain the procedure for calculating these tables as applicable for programming on the small electronic tabular calculator MESM of the Ukrainian SSR Academy of Sciences. There are 2 Soviet references.

Rabinovich, Z.L. Arithmetic Unit of the Specialized Electronic Calculator SESM-1

18

The author describes the circuit and operating principle of the series-action arithmetic unit of the SESM-1 machine and explains how operations are performed in it. The SESM-1 is used for solving systems of linear algebraic equations by Zeidel's method.

The author thanks the following persons for their cooperation in developing details of the arithmetic unit: Engineer A.L. Gladyshev (control of arithmetic units), V.V. Kravtsov (internal storage memory), and I.T. Parshchenko (summarator and control of operations).

There are 3 Soviet references.

Card 4/2

Problems in Computer Mathematics (Cont.) SOV/1345

gate circuit. There is 1 Soviet reference.

Dashevskiy, L.N. Design of Symmetrical Flip-Flops for
Maximum Reliability 55

The author explains the design procedure and derives
and discusses the necessary formulas. Technical data
are provided. There are 6 references, of which 4 are
English and 2 Soviet.

Kondalev, A.I., and B.N. Malinovskiy. Dynamic Flip-Flop With
Triode Transistors 71

The authors describe a dynamic flip-flop using point-
contact triode transistors, discuss its circuit and pro-
vide experimental data on its performance under various
operating conditions. There are no references.

Abalyshnikova, L.M., and S.B. Pogrebinskiy. Investigation of
a Flip-Flop With Junction Triode Transistors 76

The authors discuss the circuit of a flip-flop using
junction type transistors, which ensures stable operation

Card 6/8

Problems in Computer Mathematics (1963.)

38/1941

at frequencies up to 400 Mc. They also explain a method for approximate calculation of circuit parameters and provide results of experimental investigation. There is 1 Soviet reference.

Zorina, Z.S., and Ye.A. Shchegolev. Resonance Gates Controlled by Triode Transistors

84

The authors explain why gates with magnetic elements in a flip-flop circuit using triode transistors are preferable to gates using diode-transistors in the same circuit. There are 5 references, of which 4 are Soviet and 1 English.

Abalyshnikov, I.M. Some Results of an Investigation of Electron Tube Performance in High-speed Electronic Computers

94

The author presents statistical data on the causes of breakdown of electron tubes in high-speed computers with respect to operating conditions. In conclusion, the

Card 7/8

Problems in Computer Mathematics (G.S.) SW/1145

author states that: 1. the 6N9S and 6N8S tubes suffer breakdown either during the first 1,000 hours of operation or they last 5,000-7,000 hours. 2. the most frequent defects which develop in tubes under any operating conditions are a decrease in plate current and a change in characteristics. There are 2 Soviet references.

AVAILABLE: Library of Congress

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Card 8/8

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(S) (U) (S) (H) (F) (A) (L), V. (A).

16(6)

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PHASE I BOOK EXPLANATION

SOV/3177

Matematika v SSSR za sorok let. 1917-1957 (Obzornyye stat'i (Mathematics in the USSR for Forty Years. 1917-1957) Vol 1: Review Articles) Moscow, Fizmatgiz, 1969. 1992 p. 5,500 copies printed.

Eds: A. I. Kuran, (Chief Ed.), V. I. Bitvutskov, V. G. Bdyanskly, Ye. B. Dynkin, G. Ye. Shilova, and A. P. Yushkevich; Ed. (Inside book): A. F. Lapko; Tech. Ed.: S. N. Akhlanov.

PURPOSE: This book is intended for mathematicians and historians of mathematics interested in Soviet contributions to the field.

COVERAGE: This book is Volume I of a major 2-volume work on the history of Soviet mathematics. Volume I surveys the chief contributions made by Soviet mathematicians during the period 1947-1957; Volume II will contain a bibliography of major works since 1917 and biographic sketches of some of the leading mathematicians. This work follows the tradition set by two earlier works: Matematika v SSSR za pyatnadtsat' let (Mathematics in the USSR for 15 Years) and Matematika v SSSR za tridsat' let

Card 1/10

Mathematics in the USSR (Cont.)

SOV/3177

(Mathematics in the USSR for 30 Years). The book is divided into the main divisions of the field, i.e., algebra, topology, theory of probabilities, functional analysis, etc., and contributions and outstanding problems in each discussed. A listing of Soviet and Soviet mathematicians is included with references to their contributions in the field.

TABLE OF CONTENTS

Editorial Comment	11
Sanovskaya, S. A. Mathematical Logic and the Foundations of Mathematics	13
Introduction	13
Ch. I. Certain Problems of the Theory of Sets	18
1. Axiomatic theory of sets	13
2. Descriptive theory of sets	27

Card 2/10

SOV/3177

Mathematics in the USSR (Cont.)

Ch. II. Theory of Algorithms and Operators. Functions and Operators	34
3. On the representation of recursive functions. Functions of great range	34
4. Definition of an algorithm. General theory of algorithms	39
5. Countable sets and computable operations on sets. General concepts of enumeration and a program	46
6. Definition of a queueing problem and the algorithmic convergence of queueing problems. Structure of the degree of difficulty	50
7. The problem of Post convergence and related problems	57
8. Descriptive properties of arithmetical sets. Problems of classifying sets, functions, and other objects	65
Ch. III. Mathematical Applications of the Theory of Algorithms	66
9. Algorithmic problems of algebra	66
10. Constructive interpretation of mathematical statements. Constructive mathematical analysis	66

Card 3/18

Mathematics in the USSR (Cont.)

SOV/3177

Ch. IV. Logical and Logical-Mathematical Calculus	11
11. Constructive calculus from the classical and constructive points of view	15
12. Logical calculus and their models. Problems of solvability, completeness, and non-contradiction	101
13. The algebra of logic and its generalizations	102
Conclusion	11
Linnik, Yu. V. Theory of Numbers	121
Kurosh, A. G., and V. M. Glushkov. General Algebra	101
1. Introduction	101
2. Abstract theory of groups	104
3. Topological groups	103
4. Ordered groups	106
5. General theory of semigroups	102
6. Rings and algebras	103
7. Lattices General algebraic systems. Projective planes	100

Card 4/18

05775
SOV. 41 1-4-1 15

16(1)
AUTHOR:

Glushkov, V.M. (Kiyev)
On the Theory of Special Locally Compact Groups

TITLE:

PERIODICAL:

Ukrainskyy matematicheskyy zhurnal, 1959, Vol. 11, No. 1, pp. 117-121
(USSR)

ABSTRACT:

Theorem 1: In locally nilpotent locally compact groups the minimum conditions (descending chain condition) are equivalent for arbitrary closed subgroups and for Abelian closed subgroups.
Theorem 2: A locally nilpotent locally compact group G with minimum condition for closed Abelian subgroups, has an increasing central series and is an extension of a direct product of finitely many one-dimensional toroidal and discrete quasitornal groups by a finite nilpotent group. Here every toroidal subgroup is contained in the center of G .
Topological locally nilpotent groups with minimum condition for closed subgroups are called special groups. The discretely topologized direct product $G = P_1 \times \dots \times P_k$ is called the discrete component of the special locally compact group G and the connected component of the unity A of G is called the continuous component of G .

Card 1/2

On the Theory of Special Locally Compact Groups

35775
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Theorem 3: The discrete component of a special locally compact group G satisfies the minimum condition for subgroups.

Theorem 4: Every special locally compact group G is isomorphic to the factor group of the direct product of the connected and discrete component of G with respect to the central subgroup.

Theorem 5: The class of the special locally compact groups consists only of direct products of discrete groups, p -groups and solvable groups as well as of finite groups of order p^n for $n \geq 1$ and p prime to discrete subgroups.

S. N. Chernikov is mentioned in the paper.

There are two types of groups of which are S and T groups and S groups are transitive and T groups are not.

SUBMITTED: April 1975

Card 2/2

SOV/11-19-1971

18(1)

AUTHOR:

Glushkov, V.M. (Kiyev)

TITLE:

On the Structure of Connected Locally Bicom pact Groups
(O stroenii svyaznykh lokal'no bikompaktnykh grup)

PERIODICAL:

Matematicheskiiy sbornik, 1959, Vol 38, Nr 1, 31-40, 1959

ABSTRACT:

Let G be a locally bicom pact group and $B \times L$ its local decomposition into the direct product of the bicom pact group B and the local Lie group L (compare Glushkov [Ref 3]). Such a decomposition is called a bicom pact decomposition. The author gives a method which permits to construct bicom pact decomposition in which the components B and L are determined uniquely by the group up to a local isomorphism. The author investigates the representations of arbitrary connected locally bicom pact groups by factor groups of direct products of groups with a simple structure. Some results on Lie groups with isomorphic Lie algebras are transferred to arbitrary connected locally bicom pact groups. An interesting relation between the local and the linear connection is proved: a connected locally bicom pact group is locally connected then and only then if it is linearly connected. The proofs base on the earlier papers of the author [Ref 3, 4]. 10 theorems, 9 lemmas and numerous definitions and conclusions.

Card 1/2

On the Structure of Connected Locally/ Bicompart Groups 507/59-48-1 2/1

are formulated. The author mentions A.I. Mal'tsev. Finally the author completes a theorem of his paper on locally nilpotent groups free of torsion (Matematicheskii sbornik, 1955, Vol. 37 pp 477-506).
There are 10 references, 7 of which are Soviet and 3 American.

SUBMITTED: September 2, 1957

Card 2/2

GLUSHKOV, V. I.

"Concerning One Aspect of Cybernetics," Transcript of a lecture given before
a seminar for improving the skills of teachers in technikum /technical schools/.
Kiev, 1960, 17 pages.

GLUSHKOV, Viktor Mikhaylovich [Hlushkov, V.M.], doktor fiziko-matem.nauk;
YUSHCHENKO, K.L., otv.red.; TEPLYAKOVA, A.S., red.

[Control elements in automatic production processes] Keruiuchi
mashyny avtomatyzovanoho vyrobnytstva. Kyiv, 1960. 38 p. (Tova-
rystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrain's'koi
RSR. Ser.5, no.9). (MIRA 13:11)
(Automatic control) (Servomechanisms)

S/194/61/000/006/013/077
D201/D502

9.7:00

AUTHORS:

Glushkov, V.M., Rabinovich, Z.M. and Voyteva, Ye.L.

TITLE:

Analysis of trigger transients by an electron digital computer

PERIODICAL:

Kolektivnyy zhurnal avtomaticheskoy radioelektroniki, no. 6, 1961, 58, abstract 6-3232 (V.S. Vses. Nauch.-vuz. konferentsiya po teorii i metodam rascheta nelineynykh elektr. tsapov, no. 2-II (2), Leningrad, 1960, 95-112)

TEXT: Description of methods used and of certain preliminary results of mathematical analysis by the computer 'Ural' of transients of a trigger are given. The analysis was undertaken in order to explain certain fine details of the mechanism of trigger operation and to determine possible ways of its design from the point of view of its operating reliability. The trigger circuit investigated was that used in the 53CM (P3M) computer. The analysis was

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analysis of trigger transients...

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performed by means of the actual solution of a system of non-linear differential equations by the 'Ural' computer. It was thus possible to analyze the mechanism of trigger operation and to understand the relationship between the reliability of the saltator and the speed of trigger operation. The preliminary results of the analysis are given. 11 figures. 4 references. [Abstractor's note: Complete translation]

VB

1960 2/2

GLUSHKOV, Viktor Mikhailovich, doktor tekhnicheskikh nauk

Informational possibilities of modern electronic computers.
Izv. vys. ucheb. zav.; elektrotekh. 3 no.7:3-9 '60.

(MIRA 13:9)

1. Chlen-korrespondent Akademii nauk USSR, direktor Vychislitel'-
nogo TSentra AN USSR.
(Electronic calculating machines)

26.11.82
S/021/60/000/004, 005/010
D232/D305

9,7100

AUTHOR: Hlushkov, V.M., Corresponding Member of AS UkrSSR

TITLE: Two universal criteria of efficiency for computers

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovid. no. 4,
1980, 477 - 481

TEXT: The criteria proposed by the author take into account all the basic parameters of the computer; each criterion can be used independently. A fundamental concept is that of the effective speed of the computer, as distinct from nominal speed. It takes into account all time losses during the use of the computer. Auxiliary concepts for exact definition of this one are: A finite class A of problems which the computer is supposed to solve, statistics of the class i.e. the relative frequency $f(x)$, with which every problem a from A occurs during unlimited time, algorithmic complexity of solution of the problem. The latter can be defined in four different ways: 1) By the number of typical operations

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Two universal criteria of ...

necessary for the solution; 2) By the total number of arithmetical operations necessary for the solution (this definition is suitable only for arithmetical problems); 3) By total quantity of arithmetical operations, each one being counted according to its degree of complexity; the unit of complexity is e.g. the addition of two binary numbers of 30 digits each so that the complexity of addition of 2 numbers of n digits respectively is $mn/30$ etc. (arithmetical problems only); 4) The fourth method is related to the first in the same way as the third to the second: a universal unit of complexity must be introduced for all operations (including control op. and logical op.). The author does not discuss exact methods of definition. The problems from A are put successively on a real computer B, after solution of each problem one can expect a new problem to come, always with the same probability $f(x)$. Time is counted from the instant when the computer has started operating. Then one can estimate the algorithmic complexity of the work carried out by the computer during an arbitrary period Δt - denoted by $N(t)$. The mathematical expectation of the limit $\lim_{t \rightarrow \infty} N(t)/t$,

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Two universal criteria of ...

$t \rightarrow \infty$ is called the effective speed of the computer, and is denoted by n_e , while the nominal speed is denoted by n_n . If one denotes by $t(a)$ the actual time (in secs) used for solving the problem a (taking into account the input and output times and daily and weekly maintenance) one has

$$n_e = \frac{\sum_{a \in A} f(a) N(a)}{\sum_{a \in A} f(a) t(a)}$$

$f(a)$ being the probability for the problem a to occur. Since it is often impossible to determine $f(a)$ accurately one must use the formulae

$$n_e = p n_n, \quad (2) \quad p = p_o p_m p_v p_k p_p.$$

Card 3/5

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Two universal criteria of ...

p_0 being the coefficient of efficiency of the operating system of the computer (without external operations), p_m that of decrease in speed due to information exchange with magnetic cylinder and magnetic tapes, p_v coefficient of time loss during input and output, etc. The coefficient p_0 can be defined as the product of coefficients of acceleration or retardation due to specific properties of the set of operations of the computer. The first criterion is that of the maximum of effective speed. Its chief defect consists in not taking into account the complexity of the computer itself, i.e. economical factors. Therefore, its validity is restricted to the cases when the speed must be increased regardless of costs. For other cases the concept of the price of effective speed is introduced. A period T is established after which the computer must be replaced by a new one, and total expenses $P(T)$ for the construction of the computer and its use during T are determined. The author believes that programming expenses are not to be included

Card 4/5